Memorandum

DATE: September 1, 2016

TO: File

From: Sean Sheldrake, USEPA Project Manager

Subject: Enhanced Natural Recovery (ENR)

In furtherance of consultation with NMFS on impacts to critical habitat from the Portland Harbor cleanup, I called Genevieve Angle of NOAA fisheries on August 31, 2016. The main reason for my call was to discuss with her possible additions of ENR areas in the river beyond what was in the preferred alternative. She expressed several comments:

- The Willamette River and Lower Columbia are deficient of sand needed for healthy habitat. Addition of sand for ENR cleanup purposes would have a beneficial impact to the system.
- 2. Timing is critical to work out during the design process, i.e. not applying all the sand at the same time so as to minimize any simultaneous temporal impact.
- 3. Powdered activated carbon (PAC) is not a concern at the 5% application rate or similar contemplated by the existing draft Biological Assessment and discussed with fisheries this past winter and early spring. NMFS would like the substrate of that application to include habitat friendly sand if at all possible. In other words, the new sediment surface they would like to be habitat friendly.

No objections were raised relative to pursuing these concepts in our ROD on the scale we are contemplating, i.e. to 75 or 50 ppb PCBs throughout the harbor outside of areas of dredging or capping.